REMINGTON & VERNICK ENGINEERS

One Harmon Plaza, Suite 600
Secaucus, NJ 07094
O: (201) 624-2137
F: (201) 624-2136

Environmental Assessment
Proposed 10,000 ft^2 Ivanoski Park Site Restoration
170 Charles Street, Secaucus, New Jersey

As part of the Green Acres funding proposal, each applicant must collect, evaluate, and present pertinent environmental information necessary to ascertain the suitability of the site for the activities proposed. In preparing this document the Author reviewed and considered applicable Landscape Project and Fish and Wildlife maps and reports, developed by the New Jersey Department of Environmental Protection (DEP) Fish and Wildlife, during the preparation of the environmental assessment. Additionally, historic aerials of the property were reviewed,

REPORT

1. DESCRIPTION OF THE PROPOSED PROJECT

a. Briefly describe the total development project - The entire site is currently impervious, consisting of a small asphalt softball area and rubberized safety surface, with two (2) swing sets and a small playground. The demolition would consist of the full removal of the asphalt area, the rubberized safety surface, two (2) swing sets and playground equipment. The improvements would consist of a rubberized safety surface with underdrains, a 25-foot (ft.) diameter (dia) gazebo, two (2) all-inclusive swing sets, an all-inclusive playground equipment for ages two (2) to five (5) year olds, an all-inclusive playground equipment for ages five (5) to 12-year-olds, new curb, benches, picnic tables, trash receptacles, and tree planting.

b. State objectives of the project - to restore playground capacity to Town's with over 22,000 residents with few facilities in the southeastern section of the Town. The renovation of this park improves drainage, park participant safety, and serves the residents in the south eastern section of the Town where parklands and open space are scarce.

c. Fully describe multi-phase projects -

- Full site demolition duration is expected to last two (2) to three (3) weeks including stripping of asphalt pavement.
- Installation of drainage facilities requiring excavation of offsite disposal of 500 cubic yards (CY) of soil duration is expected to last one (1) to two (2) weeks.
- Earthwork and tie-ins to the sanitary and storm systems duration is expected to last two (2) to three (3) weeks.
- Installation of 10,000 square feet (ft^2) of rubberized safety surface and 370 ft. of 9x18-inch curb, and 25 ft of new fencing, duration is expected to last two (2) to three (3) weeks.
- Installation of amenities including all-inclusive playground equipment, four (4) benches with concrete pads, a 25 ft dia gazebo, four picnic tables, planting four shade trees along the 4,000 ft^2 vegetative strip flanking the north Charles Street sidewalk, and new gate, duration is expected to last two (2) to three (3) weeks.

2. DESCRIPTION OF THE ENVIRONMENT

Describe existing environmental features:

a. **Vegetation** - The Site contains a 4,000 ft^2 vegetative strip flanking the north Charles Street sidewalk, containing eight (8) drit rose bushes (Rosa hybrida) and one (1) weeping cherry bush (Prunus serrulata), with the remaining shrubbery protected during site renovation and the addition of four (4) shade trees.

b. **Wildlife, including State and federal threatened and endangered species and critical habitats** - wildlife in urban Secaucus consists of cats, racoons, and groundhogs. There are no State and federal threatened and endangered species and critical habitats. The nearest critical habitat is located 3/4 mile to

One Harmon Plaza, Suite 600
Secaucus, NJ 07094
O: (201) 624-2137
F: (201) 624-2136

the east on Penhorn Creek, which drains into the Hackensack River, 1.25 miles to the west of the Site. Mammals or evidence of their occurrence observed included the Common Raccoon (*Procyon lotor*) and Gray Squirrels (*Sciurus carolinensis*). Other common area mammals include the presence of eastern chipmunks (*Tamias striatus*), field mice (*Acodemus),* opossum (*Didelphis virginiana*), eastern cottontail rabbit (*Sylvilagus floridanus),* and white-footed mouse (*Peromyscus leucopus*) are expected to inhabit the areas described above. Avian species visually or auditorily observed included the Canadian Goose (*Branta canadensis)*, Mallards (*Anas platyrhynchos*), the American Bittern (*Botaurus lentiginosus*), the Red-winged Blackbird (*Agelaius phoeniceus*), American Robin (*Turdus migratorius*), Tufted Titmouse (*Baeolophus bicolor*), Northern Cardinal (*Cardinalis cardinalis),* American Goldfinch (*Spinus tristis*), and the American Crow (*Corvus brachyrhynchos*). No aquatic vertebrate species such as reptiles, amphibians or fish are present except for surface water bodies removed from the Site (Hackensack River and Penhorn Creek), 1.25 miles west and ¾ of a mile east of the Site, respectively.

c. **Geology, Topography, and Soils** - The Site is flat located at Elevation 12.0 ft above mean sea level (amsl). According to the publicly available information provided by the United States Geological Survey (USGS), the Site is located within the Piedmont Physiographic Province. The Piedmont Physiographic Province is characterized by rolling terrain, underlain by sedimentary rocks (red shale) of relatively recent (Triassic) origin (about 200,000,000 years old); with rocky ridges and outcrops (Watchung Mountains, Sourland Mountain, Snake Hill (located 1 mile southeast of the Site), and the Palisades (located two (2) miles east of the Site). The Palisades consist of igneous origin (basalt and diabase). The bedrock geology beneath the Site is underlain by the Passaic Formation (J_D) defined as the Fine grained to aphanitic dikes, medium to coarse-grained, sub ophitic[1] discordant stock-like intrusions of dark-greenish-gray to black diabase; and plugs of dark grey, concordant to discordant, sheet like, medium to coarse-grained, quartz rich to albite-rich granophyre[2]. Granophyre consists of sub-volcanic rock containing both quartz and alkali feldspar. The bedrock underlying the Site is known to be at various depths to approximately 10.0-15.0 ft. below ground surface (bgs). Surficial geology at the Site is identified as the Rahway Till. According to the USGS and the U.S. Department of the Interior, Rahway Till is described as dark reddish brown (2.5 YR 3/4) to reddish brown (5 YR 5/4) to dark brown (7.5 YR 4/4) to yellowish brown (10 YR 5/4) sandy-to silty-to-clayey till, containing commonly 5-20% pebbles, cobbles, and boulders of gneiss, sandstone, basalt, and quartzite; in areas underlain by shale and sandstone; matrix contains abundant shale and siltstone fragments and reddish brown silt and clay; noncalcareous; chiefly compact, firm to hard consistency; gravel clasts are generally nonweathered, subangular to surrounded; gravel clasts of fine-grained sandstone commonly are striated; rounded gravel clasts are abundant locally. Deposits contain a few thin lenses of stratified gravel, sand, and silt; minor iron-manganese stain is on joint faces. Thickness generally 3.0-9.1 m (10-30 ft.); as much as 15.2 m (50 ft.) thick in small drumlins. Drumlins are a low oval mound or small hill, typically one of a group, consisting of compacted bolder clay molded by past glacial action of the Wisconsin Glacier 18,000 years ago. Unified Soil Classification Society (USCS) soil units described include brown (7.5 YR 4/4) to strong brown (7.5 YR 5/6) silty till, containing 5-35% pebbles, cobbles, and boulders of basalt or diabase, sandstone, gneiss, and quartzite. In areas underlain by basalt or diabase, and on sandstone and serpentinite bedrock east of the Palisades; till is, compact-to-loose, very soft-to firm consistency, locally exhibiting sub horizontal fissility. Thickness within this geological horizon is generally less than 1.8 m (six (6) ft.). Using the United States Department of Agriculture & Natural Resources Conservation Service Online *Web Soil Survey*, the major soil component at the Site is identified as Central Park (CenA), extremely gravelly, sandy loam with level topography. Soil Surveys[3] indicate the area to be underlain by soils identified as "GM-

[1] *The common texture of an igneous basaltic rock in which feldspar crystals are approximately the same size as the pyroxene and are only partially included in them. Pyroxene is a silicate mineral consisting of calcium, magnesium and iron occurring as prismatic crystals. Iron and manganese were found in ground water samples at relatively elevated concentrations.*

[2] *Bedrock Geologic Map of Northern New Jersey, 1996*

[3] *Rutgers University, Soil Engineering Survey, Report No. 4, Bergen and Hudson County, USGS, 1951*

One Harmon Plaza, Suite 600
Secaucus, NJ 07094
O: (201) 624-2137
F: (201) 624-2136

46/Is". The *GM-46/Is* indicates glacial deposits ascribed to the Wisconsin glacier and identified as ground morainic till. Unsorted heterogeneous, including intermixed soil factions which range from clay sizes to gravel, cobbles and boulders. Silt and sand sizes predominate but sandstone particles are the major constituents of the drift and colors are usually reddish in tone. The *Is* designation indicates that the GM-46 is underlain by dense, hard, usually coarse-grained rock, composed of dissimilar minerals.

d. **Water Resources/Hydrology** - The Site is mapped as being underlain by the Brunswick bedrock aquifer system. The Brunswick aquifer is described by the New Jersey Geological Survey as being generally comprised of sandstone, siltstone and shale of the Passaic, Towaco, Feltville and Boonton formations. Within the fractured aquifer system, groundwater is typically non-saline, slightly alkaline, non-corrosive and hard due to the calcium bicarbonate-rich geology. Groundwater exhibiting subordinate calcium-sulfate within the aquifer is associated with high total dissolved solids (TDS). The aquifer system includes conglomerate facies along the northwest margin of the basin. The Diabase aquifer system is described as hard and dense due to igneous geology with fractured groundwater transportation. The aquifer contains several high-capacity pumping wells, and the groundwater is typically non-saline with varying levels of alkalinity, moderate hardness and rich in calcium-bicarbonate due to geologic contribution. The tidally influenced Hackensack River is approximately 1.25 miles west of the Site and flows southward toward its confluence with Newark Bay, approximately three (3) miles downstream. The Site ground water flows in an easterly direction to Penhorn Creek which discharges to the Hackensack River 1.25 miles southwest of the Site. The sandy/silty soils result in a ground water flow of approximately 30 feet (ft.) per year with a 1 ft. per one hundred-ft. gradients. Depth to groundwater on-site is approximately five (5) to 10 ft. bgs. Of note, the tidal variation of the Hackensack River ranges from 0 to 4.5/5.0 ft. amsl, and Penhorn Creek has tidal variations as well. Penhorn Creek runs through the Croxton Rail Yards and other industrial areas north of the site resulting in very poor water quality. Penhorn Creek wetland areas are surrounded by a significant footprint of Phragmites australis reeds.

e. **Historic/Archeological Resources** - The Site is a residential area established in the 1940's with no historic or archaeological features recorded. The nearest archeological site is the footprint of Secaucus High Tech High School, one (1) mile to the southeast, the site of the former largest pauper's grave in North America. RVE reviewed 19 historical aerial photographs for the Site area dated 1931, 1953, 1954, 1966, 1979, 1985, 1987, 1995, 2002, 2006, 2008, 2009, 2010, 2011, 2012, 2013, 2015, 2017, and 2019 acquired from Historic Aerials: Viewer. Due to the small scale of the photographs, it was difficult to observe fine details related to the Site. Based on our review, the 1966 aerial photograph is the first time the site is depicted as a park, which is the current use. From 1931 to 1966 a single structure was on the property surrounded by open space, there is no indication whether the property was used for agricultural uses. No obvious indications of AOCs were observed in the historical aerial photographs.

f. **Transportation/Access to Site** - Access to the Site is via County Avenue by automobile and bus service on the west side (southbound lane) of County Avenue between Louis Street and Charles Street, approximately 500 ft. walking distance from the Site.

- **Adjacent Land Uses/Description of the Surrounding Neighborhood** - The area is zoned Low Density Residential (LDR) with Neighbor Hood Commercial (NC) located 200 ft. west of the Site on County Avenue.

3. ENVIRONMENTAL IMPACT ANALYSIS OF PROPOSED ACTION

Impacts are defined as direct or indirect changes to the existing environment, whether beneficial or adverse, that are anticipated to result from the proposed action or related future actions and uses. Any off-site impacts, such as increased traffic on neighborhood roads or increased noise levels in surrounding areas, should be described. Whenever possible, environmental impacts should be quantified (i.e., number of trees to be removed, cubic yards of cut/fill, etc.).

a. Discuss all affected resources and the significance of each impact

One Harmon Plaza, Suite 600
Secaucus, NJ 07094
O: (201) 624-2137
F: (201) 624-2136

1. Beneficial Long-Term impacts include reduction of stormwater from the Site during Peak Flow periods as a result of the Underground Detention facility installed, and potential increases in Charles Street parking as residents take advantage of upgraded park facilities. Since the Town requires only 50 acres or so for recreation of suburban residents, the Town has achieved this level of amenity since it currently has 200 acres. Typically, the site at maximum usage has four (4) spaces available on Charles Street and four (4) available on Moller Street. It is not anticipated that site improvements will dramatically increase this parking requirement. Finally, at least one table shall be ADA certified, which is a long-term benefit to amenities proposed.
2. Construction Short-Term impacts include increased traffic on Charles Street during a three (3) to four (4) month period (expected to be minimal), excavation of a potential 500 CY of soil for offsite disposal of excavated material to construct drainage improvements, and off-site disposal of construction and demolition (C&D) material (estimated at 75 CY).

b. **Discuss short-term and long-term project impacts** - Short Term impacts include construction activity on Charles Street for three (3) to four (4) month period. Traffic will be minimized and is not expected to raise vehicle counts on Charles Street and County Road by more than five (5) percent (%) during peak construction activity. Soil load out (500 CY) and transport offsite is expected to take one week, and it is not anticipated that a flagman will be required pending receipt of the ECode Permit from the Town Building Department. The tie-in to the existing drainage system on Charles Street, is expected to take one day and one-way traffic will be arranged by the Contractor for this activity. Construction vehicles (eight (8) estimated at peak) will park on park property during site restoration activity. Long Term impacts include periodic visits to the site by Town residences, pursuant to Charles street parking requirements practiced in the past. Long Term impacts also include reduction of stormwater from the Site during Peak Flow periods as a result of the Underground Detention facility installed.

c. **Discuss anticipated increase in recreation and overall use of Site over time -** Secaucus has a population of 21, 295. It is recommended that 2.5 acres be dedicated to suburban populations, which translates to 52 acres for the Town. The Town currently has 200 acres. Since the park services the residence of the southeast section of the Town, where parks and open space is scarce. It is expected that usage of this park will increase commensurately over time.

d. **Identify adjacent environmental features that may be affected by the proposal** - There are no significant environmental resources impacted by the proposed construction. The nearest wetland area is ¾ of a mile to the east of the Site along Penhorn Creek.

e. **List any permits required for project and brief status (i.e., waterfront development) -**The only permits required are a Soil Conservation Service (SCS) Permit with the Hudson Essex Passaic Soil Conservation (HEPSCD) and an eCode Construction Permit with the Town of Secaucus Building Department.

f. **For development that would impact an undisturbed portion of the project site, the local government must submit a Natural Heritage Data Request Form to the DEP's Office of Natural Lands Management (form available at the website or by writing to Natural Heritage Program, PO Box 404, Trenton, New Jersey 08625-0404). Please attach and discuss the results of the search.** - There is no undisturbed portion of the property as part of site improvements. The entire site will be resurfaced.

g. **Discuss if/how the project may be impacted by sea level rise and any related design considerations**. –The Site (Block 38 Lot 15) is not in a flood hazard area and is part of the 75% of Town Sites having a lower risk of flooding.

4. ALTERNATIVES TO THE PROPOSED ACTION

a. **Identify alternate sites** – The town has 200 acres of open space and 20 parks. However, most of the parks and open areas are in the north and west portion of the Town. Secaucus is highly developed and there is no reasonable alternative to the Town planning refurbishment and improvements to the Ivanoski Park, which services the southern part of the Town with a population of between eight (8) and 10,000 residents.

b. **Discuss alternate levels and types of development** - The limited size of Block 38 Lot 15 (10,000 ft^2) restricts improvements to the amenities proposed, i.e., spray feature, swings, picnic benches, gazebo.

REMINGTON & VERNICK ENGINEERS
One Harmon Plaza, Suite 600
Secaucus, NJ 07094
O: (201) 624-2137
F: (201) 624-2136

c. **Compare environmental impacts of each alternative** - The limited size of Block 38 Lot 15 (10,000 ft^2) restricts improvements to the amenities proposed, i.e., spray feature, swings, picnic benches, gazebo.

5. MITIGATING MEASURES

Describe the measures that will be undertaken to mitigate adverse impacts.

- All impacts are short term construction related and Town will enforce all existing noise, dust, etc., codes and restrict working hours to weekdays 8:00 AM to 5:00 PM.

6. AUTHOR(S) AND QUALIFICATIONS

Brian D. Gillen, PE, LSRP is an environmental professional with over 50 years of experiences including restoration of Brownfield sites including, the 35-acare Secaucus High Tech High School, Site PI 568193, located on a historic fill site dating back to the 17th century and partially located on the largest pauper grave site in North America. The LSRP work included concept development and implementation of alternate presumptive remedies for a 168-million-dollar school construction, including SI, RI, RAR, RAO, and SRAP and obtaining a Certification of Occupancy for the school at start of sessions in September 2018.